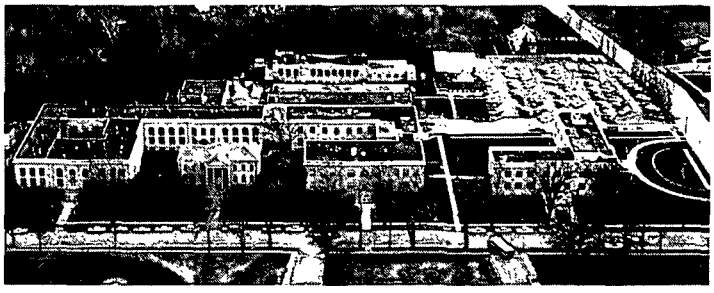

THE INSTITUTE OF PAPER CHEMISTRY, APPLETON, WISCONSIN

CONTINUOUS BASE-LINE STUDY (MODIFIED)
(MILL CORRUGATING MEDIUM DATA FOR OCTOBER, NOVEMBER, DECEMBER, 1983)

Project 2694-2

Report Fifty-Four

A Progress Report

to

FOURDRINIER KRAFT BOARD GROUP

OF THE

AMERICAN PAPER INSTITUTE

March 1, 1984

THE INSTITUTE OF PAPER CHEMISTRY

Appleton, Wisconsin

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THE INSTITUTE OF PAPER CHEMISTRY

Appleton, Wisconsin

CONTINUOUS BASE-LINE STUDY (MODIFIED)
(MILL CORRUGATING MEDIUM DATA FOR OCTOBER, NOVEMBER, DECEMBER, 1983)

SUMMARY OF 26-LB CORRUGATING MEDIUM DATA
(SEP-DEC, 1983)

Test		SEP		OCT		NOV		DEC	
		Total	Recycled	Total	Recycled	Total	Recycled	Total	Recycled
Moisture content, %	Max.	9.5	7.2	9.4	7.2	9.5	7.0	9.3	7.1
	Min.	3.7	3.7	4.1	4.1	4.2	4.2	4.2	4.2
	Ave.	6.6(32)	5.7(13)	6.6(33)	5.7(13)	6.6(35)	5.7(13)	6.6(34)	5.8(13)
Adj. basis weight, lb/M sq ft	Max.	27.2	27.2	27.2	27.2	27.2	27.2	27.0	27.0
	Min.	25.4	25.4	25.1	25.1	25.4	25.6	25.2	25.2
	Ave.	26.4(32)	26.5(13)	26.4(33)	26.5(13)	26.4(35)	26.5(13)	26.4(34)	26.5(13)
Caliper, pt.	Max.	11.6	11.6	11.2	11.2	11.2	11.2	11.7	11.7
	Min.	7.9	7.9	7.8	7.8	7.8	7.8	8.0	8.0
	Ave.	9.5(27)	9.4(12)	9.5(28)	9.4(12)	9.4(29)	9.3(12)	9.5(28)	9.4(12)
Concora, lb	Max.	70.4	70.4	70.1	70.1	70.0	69.6	71.0	70.1
	Min.	52.3	52.3	52.7	52.7	53.2	53.2	51.8	51.8
	Ave.	61.3(32)	60.4(13)	61.1(33)	60.0(13)	61.6(35)	60.4(13)	61.2(34)	60.6(13)
CD Ring Crush, lb	Max.	35.0	33.0	36.8	34.0	38.0	35.0	36.4	35.0
	Min.	19.0	19.0	19.0	19.0	21.0	21.0	24.0	24.0
	Ave.	29.3(23)	27.1(9)	29.6(24)	27.8(9)	29.3(25)	27.9(9)	29.9(25)	29.2(9)

Max. and Min. values are current machine averages.
Ave. value is current F.K.B.G. average, number of machines is indicated in parentheses.

INTRODUCTION

The continuous base-line study (modified) is a compilation of monthly averages of mill test data obtained routinely on 26-lb corrugating medium manufactured in the member mills of F.K.B.G. Mill data are included for moisture content, basis weight, caliper, Concora, and C.D. Ring Crush made on the production of individual machines which produced at least 500 tons of this grade weight during a given month.

PRESENTATION OF DATA

For the 26-lb grade weight of corrugating medium referred to earlier, data on conditioning and testing environments, mill test averages for moisture content, adjusted basis weight, caliper, Concora, and C.D. Ring Crush results are compiled in the following tables.

Table Number	Description
I-II-III-IV	Mill Test Averages on 26-Lb Corrugating Medium
V	Data on Conditioning and Testing Environments

The procedure used in calculating cumulative machine averages, machine factors, machine indexes, and F.K.B.G. indexes are described in the Appendix.

It should be explained that the number of machines for which data are compiled in each table for a specified month varies for these reasons: a machine must have (a) produced at least 500 tons of 26-lb corrugating medium during the specified month, or (b) produced 500 tons of 26-lb corrugating medium during <u>any one or more</u> of the 12 months prior to the specified month (so that a cumulative average is available), to be included in a given table.

TABLE I

AVERAGES OF ROUTINE MILL QUALITY CONTROL DATA FOR 26 LB. CORRUGATING MEDIUM

OCTOBER, 1983

	MOISTURE CONTENT, PERCENT				ADJ. BASIS WT.,*A LB./ M SQ. FT.				CALIPER, PT.				CONCORA TEST LB.			
	MACHINE DATA				MACHINE DATA				MACHINE DATA				MACHINE DATA			
CODE *S	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C
B1	6.8	6.5	104.6	104.6	26.4	26.4	100.0	100.0	8.5	9.2	92.4	88.5	69.0	69.1	99.8	113.5
G1	9.4	9.4	100.0	144.6	25.5	25.5	100.0	96.6	9.4	9.6	97.9	97.9	64.8	64.9	99.8	106.6
Y1(R)	5.8	6.2	93.5	89.2	26.5	26.5	100.0	100.4	10.2	10.1	101.0	106.2	59.3	60.2	98.5	97.5
C2	6.9	7.2	95.8	106.2	26.9	26.6	101.1	101.9	8.9	8.9	100.0	92.7	65.4	62.8	104.1	107.6
H2(R)	4.6	4.5	102.2	70.8	26.9	26.9	100.0	101.9	9.1	9.6	94.8	94.3	59.4	59.4	100.0	97.7
I2	6.3	6.5	96.9	96.9	26.5	26.4	100.4	100.4	9.4	9.4	100.0	97.9	63.6	64.7	98.3	104.6
J2	8.3	7.7	107.8	127.7	26.3	26.4	99.6	99.6					62.0	59.0	105.1	102.0
L2	7.3	7.2	101.4	112.3	26.3	26.3	100.0	99.6	10.2	10.2	100.0	106.2	56.0	56.8	98.6	92.1
N2	8.5	8.3	102.4	130.8	26.0	26.0	100.0	98.5	8.6	8.8	97.7	89.6	61.0	60.4	101.0	100.3
S2	8.6	8.1	106.2	132.3	26.4	26.1	101.1	100.0	10.3	10.2	101.0	107.3	62.5	63.0	99.2	102.8
Z2(R)	5.3	3.6	147.2	81.5	26.7	27.1	98.5	101.1	7.8	8.0	97.5	81.2	60.0	60.6	99.0	98.7
B3	6.0	6.0	100.0	92.3	26.4	26.4	100.0	100.0	9.7	9.8	99.0	101.0	61.0	60.5	100.8	100.3
C3	6.9	6.9	100.0	106.2	26.3	26.3	100.0	99.6					63.0	63.0	100.0	103.6
D3(R)	7.0	7.0	100.0	107.7	26.2	26.4	99.2	99.2	9.3	9.3	100.0	96.9	70.1	68.9	101.7	115.3
E3		6.5				26.2				8.9				66.7		
F3	6.7	6.9	97.1	103.1	26.5	26.4	100.4	100.4	8.7	8.9	97.8	90.6	65.2	61.5	106.0	107.2
G3	7.1	7.3	97.3	109.2	26.4	26.3	100.4	100.0	10.7	10.4	102.9	111.4	60.5	60.3	100.3	99.5
H3(R)	5.6	5.7	98.2	86.2	26.5	26.5	100.0	100.4	9.5	9.5	100.0	99.0	64.2	64.3	99.8	105.6
L3	5.4	5.5	98.2	83.1	25.9	26.0	99.6	98.1	9.8	9.9	99.0	102.1	59.2	61.8	95.8	97.4
M3	7.5	7.7	97.4	115.4	26.5	26.3	100.8	100.4					58.0	57.4	101.0	95.4
O3(R)	7.2	7.2	100.0	110.8	26.2	26.2	100.0	99.2	11.2	11.8	94.9	116.7	62.7	61.8	101.4	103.1
P3	6.7	6.7	100.0	103.1	26.3	26.3	100.0	99.6	10.2	10.0	102.0	106.2	58.0	57.5	100.9	95.4
S3	7.2	7.0	102.8	110.8	25.7	26.2	98.1	97.3	9.3	8.9	104.5	96.9	60.2	59.5	101.2	99.0
S3(R)	4.7	5.3	88.7	72.3	26.9	26.8	100.4	101.9	9.7	9.9	98.0	101.0	59.4	59.6	99.7	97.7
T3(R)	4.1	4.3	95.3	63.1	26.9	27.0	99.6	101.9	9.0	9.0	100.0	93.8	52.7	53.6	98.3	86.7
U3	6.1	6.1	100.0	93.8	26.7	26.7	100.0	101.1					61.0	62.0	98.4	100.3
X3(R)	5.7	6.2	91.9	87.7	26.6	26.5	100.4	100.8	9.7	9.6	101.0	101.0	60.2	60.7	99.2	99.0
A4		5.6				26.3				8.9				63.2		
B4	7.0	7.3	95.9	107.7	26.4	26.4	100.0	100.0	10.6	10.1	105.0	110.4	62.0	61.7	100.5	102.0
C4(R)	6.5	7.3	89.0	100.0	26.4	26.2	100.8	100.0					62.0	61.5	100.8	102.0
F4(R)	5.6	5.7	98.2	86.2	25.1	26.0	96.5	95.1	8.7	9.0	96.7	90.6	55.0	56.1	98.0	90.5
N4(R)	6.0	6.1	98.4	92.3	26.4	26.6	99.2	100.0	9.0	9.0	100.0	93.8	62.0	62.8	98.7	102.0
O4	7.5	7.4	101.4	115.4	26.5	26.3	100.8	100.4	10.4	10.2	102.0	108.3	56.0	56.6	98.9	92.1
R4	6.7	6.8	98.5	103.1	26.1	26.1	100.0	98.9	8.8	9.0	97.8	91.7	67.0	67.8	98.8	110.2
S4(R)	6.0	6.0	100.0	92.3	27.2	26.9	101.1	103.0	9.0	9.0	100.0	93.8	53.2	53.0	100.4	87.5

FREE DATA

	TOTAL	RECYCLED	TOTAL	RECYCLED	TOTAL	RECYCLED	TOTAL	RECYCLED
CUR. AV	6.6	5.7	26.4	26.5	9.5	9.4	61.1	60.0
CUM. AV	6.5	5.8	26.4	26.6	9.6	9.5	60.8	60.2
IND. *C	101.5	98.3	100.0	99.6	99.0	98.9	100.5	99.7

(*)-- NOTES A, B, C, D, AND E, ARE GIVEN IN APPENDIX.

TABLE II

AVERAGES OF ROUTINE MILL QUALITY CONTROL DATA FOR 26 LB. CORRUGATING MEDIUM

NOVEMBER, 1983

CODE *E	MOISTURE CONTENT, PERCENT				ADJ. BASIS WT.,*A LB./ M SQ. FT.				CALIPER, PT.				CONCORA TEST LB.			
	MACHINE DATA				MACHINE DATA				MACHINE DATA				MACHINE DATA			
	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C
A1	7.4			112.1	27.0			102.5					61.0			100.3
B1	7.3	6.6	110.6	110.6	26.2	26.4	99.2	99.2	8.6	9.2	93.5	89.6	70.0	69.2	101.2	115.1
C1	9.5	9.4	101.1	143.9	25.4	25.5	99.6	96.2	9.6	9.6	100.0	100.0	65.1	64.8	100.5	107.1
Y1(R)	6.8	6.2	93.5	87.9	26.7	26.5	100.8	101.1	10.5	10.2	102.9	109.4	59.5	60.2	98.8	97.9
C2	6.8	7.1	95.8	103.0	26.7	26.6	100.4	101.1	8.9	8.9	100.0	92.7	66.1	63.0	104.9	108.7
H2(R)	4.3	4.6	93.5	65.2	26.9	26.9	100.0	101.9	9.1	9.5	95.8	94.8	59.3	59.4	99.8	97.5
I2	6.5	6.4	101.6	98.5	26.6	26.4	100.8	100.8	9.7	9.4	103.2	101.0	62.4	64.8	96.3	102.6
J2	7.7	7.7	100.0	116.7	26.9	26.4	101.9	101.9					62.0	59.3	104.6	102.0
L2	7.2	7.3	98.6	109.1	26.5	26.2	101.1	100.4	10.2	10.2	100.0	106.2	57.0	56.7	100.5	93.8
N2	8.7	8.3	104.8	131.8	25.9	26.0	99.6	98.1	8.8	8.8	100.0	91.7	61.0	60.4	101.0	100.3
S2	9.2	8.2	100.0	124.2	26.3	26.1	100.8	99.6	10.0	10.2	98.0	104.2	64.8	63.1	102.7	106.6
Z2(R)	5.0	3.7	135.1	75.8	26.8	27.0	99.2	101.5	7.8	7.9	98.7	81.2	60.0	60.5	99.2	98.7
B3	6.4	6.0	106.7	97.0	26.4	26.4	100.0	100.0	9.7	9.8	99.0	101.0	61.0	60.5	100.8	100.3
C3	6.9	6.9	100.0	104.5	26.3	26.3	100.0	99.6					64.0	63.0	101.6	105.3
D3(R)	7.0	7.0	100.0	106.1	26.3	26.4	99.6	99.6	9.2	9.4	97.9	95.8	69.6	69.0	100.9	114.5
E3	6.3	6.6	95.4	95.4	26.0	26.2	99.2	98.5	8.0	8.9	89.9	83.3	67.0	67.0	100.0	110.2
F3	6.5	6.8	95.6	98.5	26.5	26.4	100.4	100.4	8.5	8.9	95.5	88.5	65.0	61.9	105.0	106.9
G3	7.4	7.3	101.4	112.1	26.4	26.3	100.4	100.0	10.7	10.4	102.9	111.4	60.1	60.3	99.7	98.8
H3(R)	5.8	5.6	103.6	87.9	26.5	26.5	100.0	100.4	9.5	9.5	100.0	99.0	65.8	64.4	102.2	108.2
L3	5.5	5.5	100.0	83.3	25.8	26.0	99.2	97.7	9.8	9.9	99.0	102.1	58.2	61.4	94.8	95.7
M3	7.6	7.6	100.0	115.2	26.4	26.4	100.0	100.0					56.0	57.5	97.4	92.1
Q3(R)	7.0	7.2	97.2	106.1	26.1	26.2	99.6	98.9	11.2	11.8	94.9	116.7	63.7	61.8	103.1	104.8
P3	6.7	6.7	100.0	101.5	26.3	26.4	99.6	99.6	10.0	10.0	100.0	104.2	60.0	57.7	104.0	98.7
Q3	7.1	7.0	101.4	107.6	26.4	26.0	101.5	100.0	9.2	9.0	102.2	95.8	60.0	59.7	100.5	98.7
S3(R)	4.7	5.2	90.4	71.2	26.8	26.8	100.0	101.5	9.3	9.9	93.9	96.9	58.6	59.5	98.5	96.4
T3(R)	4.2	4.3	97.7	63.6	27.2	27.0	100.7	103.0	9.0	9.0	100.0	93.3	54.0	53.6	100.7	88.8
U3	6.1	6.1	100.0	92.4	26.8	26.7	100.4	101.5					61.0	61.5	99.2	100.3
X3(R)	5.8	6.1	95.1	87.9	26.6	26.5	100.4	100.8	9.8	9.6	102.1	102.1	59.9	60.7	98.7	98.5
A4		5.6				26.3				8.9				63.2		
B4	7.2	7.2	100.0	109.1	26.5	26.4	100.4	100.4	10.4	10.2	102.0	108.3	63.0	61.8	101.9	103.6
C4(R)	7.0	7.2	97.2	106.1	26.3	26.2	100.4	99.6					62.0	61.6	100.6	102.0
F4(R)	5.6	5.8	96.6	84.8	25.6	25.8	99.2	97.0	8.6	8.9	96.6	89.6	57.0	56.1	101.6	93.8
N4(R)	6.0	6.1	98.4	90.9	26.3	26.5	99.2	99.6	9.0	9.0	100.0	93.8	63.0	62.7	100.5	103.6
Q4	7.5	7.4	101.4	113.6	26.6	26.3	101.1	100.8	10.4	10.2	102.0	108.3	57.0	56.4	101.1	93.8
R4	6.7	6.8	98.5	101.5	26.1	26.1	100.0	98.9	8.6	9.0	95.6	89.6	68.0	67.7	100.4	111.8
S4(R)	6.1	6.0	101.7	92.4	26.8	27.0	99.2	101.5	9.0	9.0	100.0	93.8	53.2	53.2	100.0	87.5

FKEG DATA

	TOTAL	RECYCLED	TOTAL	RECYCLED	TOTAL	RECYCLED	TOTAL	RECYCLED
CUR. AV	6.6	5.7	26.4	26.5	9.4	9.3	61.6	60.4
CUM. AV	6.6	5.8	26.4	26.6	9.6	9.5	60.8	60.3
IND. *C	100.0	98.3	100.0	99.6	97.9	97.9	101.3	100.2

(*)-- NOTES A, B, C, D, AND E, ARE GIVEN IN APPENDIX.

TABLE III

AVERAGES OF ROUTINE MILL QUALITY CONTROL DATA FOR 26 LB. CORRUGATING MEDIUM

DECEMBER, 1983

	MOISTURE CONTENT, PERCENT				ADJ. BASIS WT.,*A LB./ M SQ. FT.				CALIPER, PT.				CONCORA TEST LB.			
	MACHINE DATA				MACHINE DATA				MACHINE DATA				MACHINE DATA			
CODE *E	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C
A1	7.3	7.4	98.6	110.6	26.8	27.0	99.2	101.5					59.0	61.0	96.7	97.0
B1	6.8	6.6	103.0	103.0	26.6	26.4	100.8	100.8	8.6	9.1	94.5	89.6	71.0	69.1	102.7	116.8
G1	9.3	9.4	98.9	140.9	25.5	25.4	100.4	96.6	9.7	9.6	101.0	101.0	64.2	64.9	98.9	105.6
Y1(R)	5.8	6.1	95.1	87.9	26.5	26.5	100.0	100.4	10.5	10.2	102.9	109.4	60.0	60.1	99.8	98.7
C2	7.0	7.1	98.6	106.1	26.8	26.6	100.8	101.5	8.5	8.9	95.5	88.5	67.3	63.2	106.5	110.7
H2(R)	4.4	4.5	97.8	65.7	26.8	26.9	99.6	101.5	9.0	9.5	94.7	93.8	59.0	59.4	99.3	97.0
I2	6.5	6.5	100.0	98.5	26.5	26.4	100.4	100.4	9.6	9.4	102.1	100.0	64.8	64.5	100.5	106.6
J2	7.1	7.7	92.2	107.6	26.5	26.5	100.0	100.4					59.0	59.5	99.2	97.0
L2	7.3	7.3	100.0	110.6	26.4	26.2	100.8	100.0	10.3	10.2	101.0	107.3	57.0	56.6	100.7	93.8
R2	8.7	8.4	103.6	131.8	26.0	26.0	100.0	98.5	8.9	8.8	101.1	92.7	61.0	60.4	101.0	100.3
S2	8.3	8.2	101.2	125.8	25.9	26.1	99.2	98.1	10.2	10.2	100.0	106.2	64.6	63.3	102.0	106.2
Z2(R)	5.1	3.8	134.2	77.3	26.8	27.0	99.2	101.5	8.0	7.9	101.3	83.3	58.4	60.4	96.7	96.0
B3	6.2	6.0	103.3	93.9	26.4	26.4	100.0	100.0	9.8	9.8	100.0	102.1	60.0	60.5	99.2	98.7
C3	6.8	6.9	98.6	103.0	26.4	26.3	100.4	100.0					63.0	63.3	99.5	103.6
D3(R)	6.9	7.0	98.6	104.5	26.4	26.4	100.0	100.0	9.2	9.4	97.9	95.8	70.1	69.0	101.6	115.3
E3		6.5				26.1				8.6				67.0		
F3	6.5	6.7	97.0	98.5	26.6	26.4	100.8	100.8	8.1	8.9	91.0	84.4	61.3	62.2	98.6	100.8
G3	7.1	7.3	97.3	107.6	26.4	26.3	100.4	100.0	10.8	10.5	102.8	112.5	60.0	60.2	99.7	98.7
H3(R)	5.9	5.6	105.4	89.4	26.4	26.5	99.6	100.0	9.5	9.5	100.0	99.0	65.2	64.6	100.9	107.2
L3	5.2	5.5	105.4	87.9	26.0	26.0	100.0	98.5	9.8	9.9	99.0	102.1	58.8	61.1	96.2	96.7
M3	7.7	7.6	101.3	116.7	26.3	26.4	99.6	99.6					56.0	57.4	97.6	92.1
O3(R)	7.0	7.2	97.2	106.1	26.3	26.1	100.8	99.6	11.7	11.8	99.2	121.9	62.8	61.9	101.4	103.5
P3	6.8	6.7	101.5	103.0	26.4	26.4	100.0	100.0	10.5	10.1	104.0	109.4	59.0	57.9	101.9	97.0
Q3		7.0				26.1				9.1				59.8		
S3(R)	5.4	5.2	103.8	81.8	26.7	26.8	99.6	101.1	9.1	9.8	92.8	94.8	58.1	59.5	97.6	95.6
T3(R)	4.2	4.3	97.7	63.6	27.0	27.0	100.0	102.3	9.0	9.0	100.0	93.8	54.3	53.6	101.3	89.3
U3	6.1	6.1	100.0	92.4	26.7	26.7	100.0	101.1					60.0	61.3	97.9	98.7
X3(R)	6.8	6.1	95.1	87.9	26.6	26.5	100.4	100.8	9.9	9.6	103.1	103.1	60.5	60.6	99.8	99.5
A4		5.6				26.4				9.0				63.4		
B4	7.4	7.2	102.8	112.1	26.3	26.4	99.6	99.6	10.2	10.2	100.0	106.2	58.0	61.9	93.7	95.4
C4(R)	7.1	7.2	98.6	107.6	26.3	26.2	100.4	99.6					61.0	61.8	98.7	100.3
F4(R)	6.1	5.8	105.2	92.4	25.2	25.8	97.7	95.4	8.6	8.9	96.6	89.6	63.0	56.1	112.3	103.6
M4(R)	6.1	6.1	100.0	92.4	26.2	26.5	98.9	99.2	9.0	9.0	100.0	93.8	63.0	62.8	100.3	103.6
G4	7.5	7.5	100.0	113.6	26.6	26.3	101.1	100.8	10.5	10.3	101.9	109.4	57.0	56.3	101.2	93.8
R4	6.9	6.7	103.0	104.5	26.1	26.1	100.0	98.9	8.8	8.9	98.9	91.7	67.0	67.8	98.8	110.2
S4(R)	6.0	6.0	100.0	90.9	26.8	27.0	99.2	101.5	9.0	9.0	100.0	93.8	51.8	53.2	97.4	85.2
V4	6.6			100.0	26.1			98.9	8.3			86.4	67.0			110.2

FREG DATA

	TOTAL	RECYCLED	TOTAL	RECYCLED	TOTAL	RECYCLED	TOTAL	RECYCLED
CUR. AV	6.6	5.8	26.4	26.5	9.5	9.4	61.2	60.6
CUM. AV	6.6	5.7	26.4	26.6	9.6	9.5	60.8	60.3
IND. *D	100.0	101.8	100.0	99.6	99.0	98.9	100.6	100.5

(*)-- NOTES A, B, C, D, AND E, ARE GIVEN IN APPENDIX.

TABLE IV

AVERAGES OF ROUTINE MILL QUALITY CONTROL DATA FOR 26 LB. CORRUGATING MEDIUM

RING COMPRESSION, LBS.

	OCTOBER, 1983				NOVEMBER, 1983				DECEMBER, 1983			
	MACHINE DATA				MACHINE DATA				MACHINE DATA			
	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C
A1					27.0			93.8	27.0	27.0	100.0	93.8
B1												
C1	35.2			122.6	33.8	35.2	96.0	117.4	30.8	34.5	89.3	106.9
Y1(R)												
C2												
F2(R)	25.0	23.6	105.9	87.1	25.7	23.8	108.0	89.2	28.3	24.0	117.9	98.3
I2	28.0	35.3	79.3	97.6	26.0	33.5	77.6	90.3	31.0	32.0	96.9	107.6
J2	29.0	28.0	103.6	101.0	29.0	28.1	103.2	100.7	27.0	28.2	95.7	93.8
L2	29.0	27.4	105.8	101.0	25.0	27.6	90.6	86.8	26.0	27.4	94.9	90.3
A2												
S2	34.5	33.4	103.3	120.2	34.4	33.8	101.8	119.4	30.9	33.9	91.2	107.3
Z2(R)	29.0	31.0	93.5	101.0	29.0	30.0	96.7	100.7	29.0	29.7	97.6	100.7
B3	25.0	27.6	90.6	87.1	26.0	27.3	95.2	90.3	26.0	27.2	95.6	90.3
C3	30.0	30.7	97.7	104.5	31.0	30.4	102.0	107.6	32.2	30.6	105.2	111.8
D3(R)												
E3												
F3	28.1	26.8	104.8	97.9	28.4	26.9	105.6	98.6	28.8	27.0	106.7	100.0
G3	36.8	34.1	107.9	128.2	33.9	34.8	97.4	117.7	35.0	34.6	101.2	121.5
H3(R)	27.0	30.5	88.5	94.1	27.5	30.1	91.4	95.5	28.5	29.9	95.3	99.0
L3	32.7	33.0	99.1	113.9	32.5	33.0	98.5	112.8	34.4	32.9	104.6	119.4
M3	30.0	30.7	97.7	104.5	31.0	30.6	101.3	107.6	31.0	30.7	101.0	107.6
O3(R)	30.0	24.6	122.0	104.5	28.0	25.2	111.1	97.2	26.0	25.6	101.6	90.3
P3	25.0	27.6	90.6	87.1	27.0	27.4	98.5	93.8	28.0	27.3	102.6	97.2
Q3												
S3(R)	27.1	24.1	112.4	94.4	26.9	24.5	109.8	93.4	28.4	24.7	115.0	98.6
T3(R)	27.0	27.1	99.6	94.1	24.0	27.1	88.6	83.3	29.0	26.8	108.2	100.7
U3	36.0	33.8	106.5	125.4	38.0	34.9	108.9	131.9	36.4	35.9	101.4	126.4
X3(R)												
A4												
B4	33.0	33.3	99.1	115.0	33.0	33.2	99.4	114.6	32.0	33.2	96.4	111.1
C4(R)												
F4(R)	32.0	34.2	93.6	111.5	35.0	33.8	103.6	121.5	35.0	34.0	102.9	121.5
N4(R)	34.0	34.1	99.7	118.5	34.0	34.1	99.7	118.0	35.0	34.1	102.6	121.5
Q4	29.0	27.4	105.8	101.0	26.0	27.6	94.2	90.3	27.0	27.4	98.5	93.8
R4												
S4(R)	19.0	22.9	83.0	66.2	21.0	22.5	93.3	72.9	24.0	22.4	107.1	83.3
V4												
FREG DATA												
	TOTAL		RECYCLED		TOTAL		RECYCLED		TOTAL		RECYCLED	
CUR. AV	29.6		27.8		29.3		27.9		29.9		29.2	
CUM. AV	28.7		27.9		28.8		27.9		28.8		27.9	
IND. *D	103.1		99.6		101.7		100.0		103.8		104.6	

(*)-- NOTES A, B, C, D, AND E, ARE GIVEN IN APPENDIX.

TABLE V

DATA ON CONDITIONING AND TESTING ENVIRONMENTS

OCTOBER, NOVEMBER, DECEMBER, 1983

Code	Conditioning Environment: Are Quality Samples Conditioned Before Testing?	Procedure: Time	Procedure: Temp., °F	Procedure: RH, %	Testing Environment: Are Quality Samples Tested Under Controlled Conditions of Temperature & Humidity?
A1	No	--	--	--	Yes: 73 ± 2°F; 50 ± 2% RH
B1	No	--	--	--	Yes: 73 ± 2°F; 50 ± 2% RH
C1	No	--	--	--	Yes: 72 ± 2°F; 50 ± 3% RH
Y1	No	--	--	--	Yes: 72 ± 4°F; 50 ± 5% RH
C2	No	--	--	--	No
H2	No	--	--	--	No
I2	No	--	--	--	Yes: 73°F; 50% RH
J2	No	--	--	--	Yes: 73 ± 2°F; 50 ± 2% RH
L2	No	--	--	--	No
R2	No	--	--	--	Yes: 70 ± 2°F; 50 ± 10% RH
S2	No	--	--	--	Yes: 72 ± 3°F; 50 ± 2% RH
Z2	No	--	--	--	Yes: 73 ± 2°F; 50 ± 2% RH
B3	No	--	--	--	Yes: 73 ± 1°F; 50 ± 2% RH
C3	No	--	--	--	Yes: 72 ± 2°F; 50 ± 2% RH
D3	No	--	--	--	Yes: 72 ± 1°F; 50 ± 1% RH
E3	No	--	--	--	Yes: 73 ± 2°F; 50 ± 2% RH
F3	Yes	20 min	--	--	Yes: 72 ± 2°F; 50 ± 2% RH
G3	No	--	--	--	Yes: 70 ± 2°F; 50 ± 2% RH
H3	No	--	--	--	Yes: 72 ± 2°F; 50 ± 3% RH
L3	No	--	--	--	Yes: 73 ± 2°F; 50 ± 2% RH
M3	No	--	--	--	Yes: 73 ± 2°F; 50 ± 2% RH
O3	Yes	--	--	--	Yes: 70 ± 2°F; 50 ± 2% RH
P3	No	--	--	--	No
Q3	No	--	--	--	No
S3	No	--	--	--	No
T3	No	--	--	--	Yes: 73 ± 3°F; 50 ± 2% RH
U3	No	--	--	--	Yes: 72 ± 2°F; 50 ± 2% RH
X3	No	--	--	--	Yes: 72 ± 4°F; 50 ± 5% RH
A4	No data was submitted for this quarter				
B4	No	--	--	--	Yes: 72 ± 2°F; 50 ± 1% RH
C4	No	--	--	--	Yes: 72 ± 2°F; 50 ± 5% RH
F4	Yes	20 min	--	--	Yes: 72 ± 3-5°F; 50 ± 2% RH
N4	No	--	--	--	No
Q4	No	--	--	--	No
R4	No	--	--	--	Yes: 73 ± 2°F; 50 ± 2% RH
S4	No	--	--	--	Yes: 73 ± 3°F; 50 ± 2% RH
V4	No	--	--	--	Yes: 73 ± 2°F; 50 ± 2% RH

THE INSTITUTE OF PAPER CHEMISTRY

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APPENDIX

NOTES A, B, C, D, AND E, USED IN TABULATIONS OF MILL DATA

Notes A, B, C, D, and E, used in the tables of mill data are given below; these notes define the procedure used in calculating adjusted basis weight, machine factor, machine index, and F.K.B.G. index. It should be stressed that each formula is applicable only to a specific physical property of corrugating medium.

Note A: Adjusted basis weight (ABW) = reported weight (RBW) adjusted to moisture content of 7.8%:

$$ABW = RBW \left[\frac{(100 - \text{reported moisture content, \%})}{(100 - 7.8)} \right]$$

Note B: Machine factor (%) $= \left[\frac{\text{Current machine average}}{\text{Cumulative machine average}} \right] \cdot 100$ where

$$\text{Cumulative machine average} = \sum \frac{\text{CMA's}^a \text{ for previous 12 months excluding CMA for current month}}{12}$$

Note C: Machine index (%) $= \left[\frac{\text{Current machine average}}{\text{Cumulative F.K.B.G. total average}} \right] \cdot 100$ where

$$\text{Cumulative F.K.B.G. average} = \sum \frac{\text{CFKBGA's}^b \text{ for previous 12 months excluding CFKBGA for current month}}{12}$$

Note D: F.K.B.G. index (%) $= \left[\frac{\text{Current F.K.B.G. average}}{\text{Cumulative F.K.B.G. average}} \right] \cdot 100$ where

$$\text{Current F.K.B.G. average} = \sum \frac{\text{CMA's}^a \text{ for current month for all machines}}{\text{Number of machines}}$$

Note E: (R) - Indicates a medium manufactured from recylced fibers.

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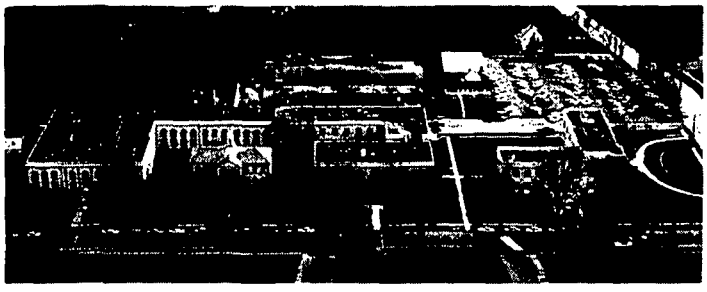
[a] CMA = current machine average for a specific physical property of 26-lb corrugating medium obtained during a given month on a specific machine.

[b] CFKBGA = current F.K.B.G. average for a specific physical property of 26-lb corrugating medium obtained during a given month.



THE INSTITUTE OF PAPER CHEMISTRY, APPLETON, WISCONSIN

CONTINUOUS BASE-LINE STUDY (MODIFIED)
(MILL CORRUGATING MEDIUM DATA FOR APRIL, MAY, JUNE, 1979)

Project 2694-2

Report Thirty-Six

A Progress Report

to

FOURDRINIER KRAFT BOARD GROUP

OF THE

AMERICAN PAPER INSTITUTE

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Appleton, Wisconsin

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SUMMARY OF 26-LB CORRUGATING MEDIUM DATA
(MARCH-JUNE, 1979)

Test		March		April		May		June	
		Total	Recycled	Total	Recycled	Total	Recycled	Total	Recycled
Moisture content, %	Max.[a]	9.4	6.9	9.5	7.0	9.3	6.9	9.2	6.9
	Min.[a]	3.0	4.2	3.0	4.1	3.2	3.8	3.4	3.8
	Av.[b]	6.3(37)	5.7(10)	6.3(38)	5.8(10)	6.3(39)	5.7(10)	6.4(37)	5.7(10)
Adj. basis weight, lb/M ft^2	Max.[a]	27.4	27.3	27.4	27.2	27.3	27.2	27.3	27.2
	Min.[a]	25.7	26.2	25.7	26.1	25.7	26.3	25.6	26.3
	Av.[b]	26.4(37)	26.7(10)	26.4(38)	26.7(10)	26.4(39)	26.7(10)	26.4(37)	26.7(10)
Caliper, pt.	Max.[a]	10.9	10.0	11.2	10.0	11.5	10.0	11.6	10.0
	Min.[a]	8.0	8.7	8.5	8.8	8.4	8.8	8.6	8.6
	Av.[b]	9.7(36)	9.2(9)	9.7(37)	9.2(9)	9.7(38)	9.2(9)	9.7(36)	9.2(9)
Concora, lb	Max.[a]	71.0	70.2	75.8	70.7	74.1	69.9	70.0	70.0
	Min.[a]	57.0	58.2	54.0	58.2	57.1	57.1	56.0	57.4
	Av.[b]	61.4(37)	62.9(10)	62.1(38)	62.8(10)	62.2(39)	62.6(10)	61.6(37)	62.8(10)

[a] Current machine average.
[b] Current F.K.B.G. average, number of machines is indicated in parentheses.

INTRODUCTION

The continuous base-line study (modified) is a compilation of monthly averages of mill test data obtained routinely on 26-lb corrugating medium manufactured in the member mills of F.K.B.G. Mill data are included for moisture content, basis weight, caliper, and Concora made on the production of individual machines which produced at least 500 tons of this grade weight during a given month.

PRESENTATION OF DATA

For the 26-lb grade weight of corrugating medium referred to earlier, data on conditioning and testing environments, mill test averages for moisture content, adjusted basis weight, caliper, and Concora results are compiled in the following tables.

Table Number	Description
I-II-III	Mill Test Averages on 26-Lb Corrugating Medium
IV	Data on Conditioning and Testing Environments

The procedures used in calculating cumulative machine averages, machine factors, machine indexes, and F.K.B.G. indexes are described in the Appendix.

It should be explained that the number of machines for which data are compiled in each table for a specified month varies for these reasons: a machine must have (a) produced at least 500 tons of 26-lb corrugating medium during the specified month, or (b) produced 500 tons of 26-lb corrugating medium during <u>any one or more</u> of the 12 months prior to the specified month (so that a cumulative average is available), to be included in a given table.

TABLE I

AVERAGES OF ROUTINE MILL QUALITY CONTROL DATA FOR 26 LB. CORRUGATING MEDIUM

APRIL, 1979

	MOISTURE CONTENT, PERCENT				ADJ. BASIS WT.,*A LB./ M SQ. FT.				CALIPER, PT.				CONCORA TEST, LB.			
	MACHINE DATA				MACHINE DATA				MACHINE DATA				MACHINE DATA			
CODE *E	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C
A1(R)	5.3	5.2	101.9	85.5	27.2	27.0	100.7	102.6	9.0	9.0	100.0	93.8	58.2	57.7	100.9	93.7
B1	7.0	7.0	100.0	112.9	26.2	26.4	99.2	98.9	10.2	10.0	102.0	106.2	58.0	60.8	95.4	93.4
C1	5.4	5.3	101.9	87.1	27.0	26.6	101.5	101.9	10.9	10.6	102.8	113.5	59.1	60.7	97.4	95.2
D1	7.2	7.0	102.8	116.1	25.7	25.6	100.4	97.0	10.2	10.1	101.0	106.2	65.0	65.3	99.5	104.7
E1	6.2	6.1	101.6	100.0	26.3	26.3	100.0	99.2	9.3	9.2	101.1	96.9	75.8	72.7	104.3	122.1
F1(R)	5.5	5.2	105.8	88.7	27.2	27.3	99.6	102.6	9.0	9.0	100.0	93.8	58.5	57.7	101.4	94.2
G1	7.1	6.7	106.0	114.5	26.2	26.4	99.2	98.9	10.2	10.6	96.2	106.2	61.5	63.0	97.6	99.0
H1	7.1	6.8	104.4	114.5	26.2	26.4	99.2	98.9	9.5	9.6	99.0	99.0	61.4	61.4	100.0	98.9
I1(R)	6.8	6.8	100.0	109.7	26.4	26.4	100.0	99.6					64.0	64.1	99.8	103.0
J1	3.0	4.4	68.2	48.4	26.7	26.9	99.2	100.8	10.2	10.7	95.3	106.2	59.5	60.3	98.7	95.8
K1	6.0	6.0	100.0	96.8	27.4	27.3	100.4	103.4	11.2	9.5	117.9	116.7	57.5	57.9	99.3	92.6
L1	7.5	7.5	100.0	121.0	26.2	26.3	99.6	98.9	8.5	8.7	97.7	88.5	66.0	65.3	101.1	106.3
M1	6.7	6.8	98.5	108.1	26.4	26.4	100.0	99.6	9.9	9.5	104.2	103.1	60.4	60.2	100.3	97.3
N1	6.1	6.2	98.4	98.4	26.6	26.6	100.0	100.4	9.9	9.7	102.1	103.1	61.7	61.7	100.0	99.4
O1	5.8	5.6	103.6	93.5	26.6	26.6	100.0	100.4	9.0	8.7	103.4	93.8	61.2	61.4	99.7	98.6
P1	6.4	6.5	98.5	103.2	25.9	26.2	98.8	97.7	9.4	9.4	100.0	97.9	54.0	57.2	94.4	87.0
Q1	7.1	7.2	98.6	114.5	26.2	26.2	100.0	98.9	9.3	9.2	101.1	96.9	62.6	63.1	99.2	100.8
R1	6.8	7.0	97.1	109.7	26.3	26.3	100.0	99.2	8.9	9.5	93.7	92.7	63.3	61.5	102.9	101.9
S1	6.9	6.8	101.5	111.3	26.3	26.5	99.2	99.2	9.7	9.6	101.0	101.0	60.0	61.4	97.7	96.6
T1(R)	4.1	4.5	91.1	66.1	27.1	27.0	100.4	102.3	8.8	8.4	104.8	91.7	60.7	60.6	100.2	97.7
U1	6.7	6.6	101.5	108.1	26.0	26.4	98.5	98.1	10.9	11.0	99.1	113.5	61.5	59.5	103.4	99.0
V1(R)	4.1	4.2	97.6	66.1	26.8	26.6	100.8	101.1	9.0	9.0	100.0	93.8	60.2	60.5	99.5	96.9
W1	6.8	6.9	98.6	109.7	27.0	27.2	99.3	101.9	10.9	10.3	105.8	113.5	63.8	61.6	103.6	102.7
X1	6.6	6.7	98.5	106.4	26.2	26.4	99.2	98.9	10.0	10.2	98.0	104.2	60.0	61.5	97.6	96.6
Y1(R)	6.5	6.4	101.6	104.8	26.7	26.8	99.6	100.8	9.0	9.0	100.0	93.8	65.0	65.0	100.0	104.7
Z1	6.6	6.1	108.2	106.4	26.3	26.4	99.6	99.2	10.2	16.7	61.1	106.2	59.0	62.1	95.0	95.0
A2	5.1	4.9	104.1	82.2	26.4	26.8	98.5	99.6	10.0	10.0	100.0	104.2	61.8	62.0	99.7	99.5
B2	6.4	6.4	100.0	103.2	26.1	26.1	100.0	98.5	10.3	10.4	99.0	107.3	58.0	59.5	97.5	93.4
C2(R)	6.0	6.0	100.0	96.8	26.1	26.6	98.1	98.5	9.0	9.0	100.0	93.8	64.8	61.6	105.2	104.3
D2	5.6	5.8	96.6	90.3	26.6	26.6	100.0	100.4	9.1	9.2	98.9	94.8	66.0	66.5	99.2	106.3
E2(R)	6.2	6.2	100.0	100.0	26.8	26.6	100.8	101.1	9.1	9.1	100.0	94.8	63.0	65.5	96.2	101.4
F2		7.3				26.1				8.6				71.0		
G2	6.9	6.9	100.0	111.3	26.2	26.2	100.0	98.9	10.6	10.7	99.1	110.4	59.0	60.5	97.5	95.0
H2(R)	6.0	6.0	100.0	96.8	26.4	26.4	100.0	99.6	10.0	10.0	100.0	104.2	63.0	63.9	98.6	101.4
I2	9.3	9.3	100.0	150.0	25.7	25.9	99.2	97.0	9.8	9.9	99.0	102.1	65.0	63.2	102.8	104.7
J2	7.0	6.9	101.4	112.9	26.3	26.3	100.0	99.2	9.9	9.8	101.0	103.1	61.0	61.1	99.8	98.2
K2(R)	7.0	7.0	100.0	112.9	26.4	26.4	100.0	99.6	9.8	9.6	102.1	102.1	70.7	70.3	100.6	113.8
L2	6.3	6.1	103.3	101.6	26.0	26.3	98.8	98.1	10.4	10.1	103.0	108.3	62.6	61.5	101.8	100.8
M2	7.5	7.4	101.4	121.0	26.1	26.0	100.4	98.5	9.0	9.0	100.0	93.8	67.0	66.0	101.5	107.9

FKBG DATA

	TOTAL	RECYCLED	TOTAL	RECYCLED	TOTAL	RECYCLED	TOTAL	RECYCLED
CUR. AV	6.3	5.8	26.4	26.7	9.7	9.2	62.1	62.8
CUM. AV	6.2	5.7	26.5	26.7	9.6	9.2	62.1	62.2
IND. *D	101.6	101.8	99.6	100.0	101.0	100.0	100.0	101.0

(*)-- NOTES A, B, C, D, AND E, ARE GIVEN IN APPENDIX.

TABLE II

AVERAGES OF ROUTINE MILL QUALITY CONTROL DATA FOR 26 LB. CORRUGATING MEDIUM

MAY, 1979

	MOISTURE CONTENT, PERCENT				ADJ. BASIS WT.,*A LB./ M SQ. FT.				CALIPER, PT.				CONCORA TEST, LB.			
	MACHINE DATA				MACHINE DATA				MACHINE DATA				MACHINE DATA			
CODE *E	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C
A1(R)	5.4	5.2	103.8	87.1	27.1	27.1	100.0	102.3	9.0	9.0	100.0	93.8	57.1	57.7	99.0	92.1
B1	7.0	7.0	100.0	112.9	26.2	26.4	99.2	98.9	11.1	10.1	109.9	115.6	61.0	60.4	101.0	98.4
C1	5.4	5.3	101.9	87.1	26.5	26.7	99.2	100.0	11.0	10.6	103.8	114.6	59.4	60.3	98.5	95.8
D1	7.4	7.0	105.7	119.4	25.7	25.6	100.4	97.0	10.0	10.1	99.0	104.2	64.0	65.3	98.0	103.2
E1	5.1	6.1	83.6	82.2	26.7	26.3	101.5	100.8	9.2	9.2	100.0	95.8	74.1	73.2	101.2	119.5
F1(R)	5.3	5.3	100.0	85.5	27.1	27.3	99.3	102.3	9.0	9.0	100.0	93.8	57.3	57.5	99.6	92.4
G1	7.1	6.7	106.0	114.5	26.2	26.4	99.2	98.9	10.3	10.6	97.2	107.3	61.2	62.9	97.3	98.7
H1	7.1	6.9	102.9	114.5	26.2	26.4	99.2	98.9	9.5	9.6	99.0	99.0	61.2	61.4	99.7	98.7
I1(R)	6.8	6.8	100.0	109.7	26.4	26.4	100.0	99.6					64.0	64.1	99.8	103.2
J1	3.2	4.3	74.4	51.6	26.9	26.8	100.4	101.5	10.3	10.6	97.2	107.3	59.0	60.2	98.0	95.2
K1	6.1	6.0	101.7	98.4	27.3	27.3	100.0	103.0	11.5	9.6	119.8	119.8	57.2	57.6	99.3	92.2
L1	7.5	7.5	100.0	121.0	26.4	26.3	100.4	99.6	8.4	8.7	96.6	87.5	71.0	65.7	108.1	114.5
M1	6.7	6.8	98.5	108.1	26.3	26.4	99.6	99.2	9.9	9.5	104.2	103.1	59.2	60.1	98.5	95.5
N1	6.4	6.2	103.2	103.2	26.3	26.6	98.9	99.2	9.7	9.7	100.0	101.0	60.0	61.8	97.1	96.8
O1	5.9	5.6	105.4	95.2	26.5	26.6	99.6	100.0	8.8	8.7	101.1	91.7	59.4	61.3	96.9	95.8
P1	6.2	6.5	95.4	100.0	26.3	26.2	100.4	99.2	9.2	9.4	97.9	95.8	58.0	56.6	102.5	93.5
Q1	7.4	7.2	102.8	119.4	26.4	26.2	100.8	99.6	10.0	9.2	108.7	104.2	62.7	63.0	99.5	101.1
R1	6.8	7.0	97.1	109.7	26.2	26.3	99.6	98.9	9.0	9.5	94.7	93.8	61.7	61.6	100.2	99.5
S1	7.0	6.8	102.9	112.9	26.2	26.4	99.2	98.9	9.7	9.6	101.0	101.0	60.0	61.2	98.0	96.8
T1(R)	3.8	4.4	86.4	61.3	27.2	27.0	100.7	102.6	8.8	8.5	103.5	91.7	60.8	60.6	100.3	98.1
U1	6.6	6.6	100.0	106.4	26.2	26.4	99.2	98.9	10.8	11.0	98.2	112.5	63.2	59.8	105.7	101.9
V1(R)	4.0	4.1	97.6	64.5	26.5	26.6	99.6	100.0	9.0	9.0	100.0	93.8	59.8	60.4	99.0	96.4
W1	6.9	6.9	100.0	111.3	26.8	27.1	98.9	101.1	10.9	10.6	102.8	113.5	64.2	62.0	103.5	103.5
X1	6.6	6.7	98.5	106.4	26.2	26.4	99.2	98.9	10.1	10.2	99.0	105.2	59.0	61.4	96.1	95.2
Y1(R)	6.5	6.4	101.6	104.8	26.8	26.8	100.0	101.1	9.0	9.0	100.0	93.8	65.0	64.9	100.2	104.8
Z1	6.6	6.1	108.2	106.4	26.7	26.4	101.1	100.8	10.5	9.8	107.1	109.4	60.0	61.7	97.2	96.8
A2	5.3	4.9	108.2	85.5	26.4	26.8	98.5	99.6	9.9	10.0	99.0	103.1	60.3	61.9	97.4	97.2
B2	6.7	6.4	104.7	108.1	26.1	26.1	100.0	98.5	10.2	10.4	98.1	106.2	58.0	59.4	97.6	93.5
C2(R)	6.0	6.0	100.0	96.8	26.3	26.6	98.9	99.2	9.0	9.0	100.0	93.8	64.7	61.9	104.5	104.4
D2	5.7	5.8	98.3	91.9	26.5	26.6	99.6	100.0	9.0	9.2	97.8	93.8	64.8	66.4	97.6	104.5
E2(R)	6.3	6.2	101.6	101.6	26.7	26.6	100.4	100.8	9.1	9.1	100.0	94.8	64.0	65.2	98.2	103.2
F2	7.2	7.3	98.6	116.1	26.3	26.1	100.8	99.2	9.3	8.6	104.6	93.8	70.0	71.0	98.6	112.9
G2	6.8	6.9	98.6	109.7	26.1	26.2	99.6	98.5	10.6	10.7	99.1	110.4	59.0	60.4	97.7	95.2
H2(R)	5.9	6.0	98.3	95.2	26.4	26.4	100.0	99.6	10.0	10.0	100.0	104.2	63.2	63.8	99.0	101.9
I2	9.3	9.3	100.0	150.0	25.8	25.9	99.6	97.4	9.8	9.9	99.0	102.1	63.0	63.5	99.2	101.6
J2	7.1	6.9	102.9	114.5	26.2	26.3	99.6	98.9	9.8	9.8	100.0	102.1	60.7	61.1	99.3	97.9
K2(R)	6.9	7.0	98.6	111.3	26.3	26.4	99.6	99.2	9.8	9.6	102.1	102.1	69.9	70.3	99.4	112.7
L2	6.0	6.1	98.4	96.8	26.1	26.3	99.2	98.5	10.3	10.1	102.0	107.3	61.1	61.5	99.3	98.5
M2	7.0	7.4	94.6	112.9	26.0	26.1	99.6	98.1	9.1	9.0	101.1	94.8	66.0	67.0	98.5	106.4

FKBG DATA								
	TOTAL	RECYCLED	TOTAL	RECYCLED	TOTAL	RECYCLED	TOTAL	RECYCLED
CUR. AV	6.3	5.7	26.4	26.7	9.7	9.2	62.2	62.6
CUM. AV	6.2	5.7	26.5	26.7	9.6	9.2	62.0	62.3
IND. *D	101.6	100.0	99.6	100.0	101.0	100.0	100.3	100.5

(*)-- NOTES A, B, C, D, AND E, ARE GIVEN IN APPENDIX.

TABLE III

AVERAGES OF ROUTINE MILL QUALITY CONTROL DATA FOR 26 LB. CORRUGATING MEDIUM

JUNE, 1979

	MOISTURE CONTENT, PERCENT				ADJ. BASIS WT.,*A LB./ M SQ. FT.				CALIPER, PT.				CONCORA TEST, LB.			
	MACHINE DATA				MACHINE DATA				MACHINE DATA				MACHINE DATA			
CODE *E	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C	CUR. AV.	CUM. AV.	FACT. *B	IND. *C
A1(R)	5.3	5.3	100.0	85.5	27.2	27.1	100.4	102.6	9.0	9.0	100.0	92.8	57.5	57.8	99.5	92.7
B1	7.0	7.0	100.0	112.9	26.2	26.3	99.6	98.9	10.4	10.1	103.0	107.2	62.0	60.2	103.0	100.0
C1	5.8	5.4	107.4	93.5	26.5	26.6	99.6	100.0	11.6	10.7	108.4	119.6	58.8	60.2	97.7	94.8
D1	7.4	7.1	104.2	119.4	25.6	25.6	100.0	96.6	10.1	10.1	100.0	104.1	64.0	65.2	98.2	103.2
E1		5.9				26.4				9.2				73.6		
F1(R)	5.3	5.3	100.0	85.5	27.2	27.3	99.6	102.6	9.0	9.0	100.0	92.8	57.4	57.4	100.0	92.6
G1	7.0	6.8	102.9	112.9	26.2	26.4	99.2	98.9	10.4	10.5	99.0	107.2	62.1	62.8	98.9	100.2
H1	7.0	7.0	100.0	112.9	26.3	26.3	100.0	99.2	9.5	9.6	99.0	97.9	61.0	61.4	99.3	98.4
I1(R)	6.8	6.8	100.0	109.7	26.4	26.4	100.0	99.6					64.0	64.0	100.0	103.2
J1	3.4	4.1	82.9	54.8	27.0	26.8	100.7	101.9	10.2	10.5	97.1	105.2	58.8	60.0	98.0	94.8
K1	6.0	6.0	100.0	96.8	27.3	27.3	100.0	103.0	9.6	9.8	98.0	99.0	58.0	57.4	101.0	93.5
L1	7.5	7.5	100.0	121.0	26.3	26.3	100.0	99.2	8.7	8.6	101.2	89.7	65.0	66.7	97.4	104.8
M1	6.8	6.8	100.0	109.7	26.3	26.4	99.6	99.2	10.2	9.6	106.2	105.2	58.1	60.0	96.8	93.7
N1	6.4	6.2	103.2	103.2	26.6	26.5	100.4	100.4	10.2	9.7	105.2	105.2	63.3	61.5	102.9	102.1
O1	5.6	5.6	100.0	90.3	26.5	26.6	99.6	100.0	9.0	8.8	102.3	92.8	61.8	61.1	101.1	99.7
P1	6.6	6.4	103.1	106.4	26.2	26.2	100.0	98.9	9.2	9.4	97.9	94.8	56.0	56.7	98.8	90.3
Q1	7.4	7.2	102.8	119.4	26.1	26.2	99.6	98.5	9.5	9.2	103.3	97.9	60.5	62.9	96.2	97.6
R1	6.6	7.0	94.3	106.4	26.3	26.3	100.0	99.2	8.9	9.4	94.7	91.8	63.7	61.7	103.2	102.7
S1	6.9	6.9	100.0	111.3	26.2	26.3	99.6	98.9	9.6	9.6	100.0	99.0	60.0	60.9	98.5	96.8
T1(R)	3.8	4.3	88.4	61.3	27.2	27.0	100.7	102.6	8.6	8.6	100.0	88.6	60.7	60.6	100.2	97.9
U1	6.8	6.6	103.0	109.7	26.3	26.3	100.0	99.2	10.7	11.0	97.3	110.3	63.4	60.2	105.3	102.2
V1(R)	4.0	4.1	97.6	64.5	26.6	26.6	100.0	100.4	9.0	9.0	100.0	92.8	60.8	60.4	100.7	98.1
W1	6.9	6.9	100.0	111.3	26.3	27.0	97.4	99.2	10.4	10.8	96.3	107.2	63.2	62.5	101.1	101.9
X1	7.0	6.6	106.1	112.9	26.1	26.4	98.9	98.5	9.9	10.2	97.0	102.1	57.0	61.1	93.3	91.9
Y1(R)	6.5	6.4	101.6	104.8	26.8	26.8	100.0	101.1	9.0	9.0	100.0	92.8	65.0	64.9	100.2	104.8
Z1	6.7	6.2	108.1	108.1	26.5	26.4	100.4	100.0	10.4	9.9	105.0	107.2	59.0	61.3	96.2	95.2
A2	5.3	5.0	106.0	85.5	26.3	26.7	98.5	99.2	9.9	10.0	99.0	102.1	60.8	61.8	98.4	98.1
B2	6.7	6.4	104.7	108.1	26.1	26.1	100.0	98.5	10.2	10.3	99.0	105.2	58.0	59.2	98.0	93.5
C2(R)	6.0	6.0	100.0	96.8	26.3	26.5	99.2	99.2	9.0	9.0	100.0	92.8	63.3	62.3	101.6	102.1
D2	5.5	5.8	94.8	88.7	26.5	26.6	99.6	100.0	9.0	9.2	97.8	92.8	68.2	66.2	103.0	110.0
E2(R)	6.1	6.2	98.4	98.4	26.6	26.6	100.0	100.4	9.0	9.1	98.9	92.8	65.0	65.0	100.0	104.8
F2		7.2				26.2				8.8				70.5		
G2	6.8	6.9	98.6	109.7	26.1	26.2	99.6	98.5	10.6	10.7	99.1	109.3	59.0	60.2	98.0	95.2
H2(R)	5.9	6.0	98.3	95.2	26.4	26.4	100.0	99.6	10.0	10.0	100.0	103.1	63.8	63.7	100.2	102.9
I2	9.2	9.3	98.9	148.4	25.6	25.9	98.8	96.6	9.6	9.9	97.0	99.0	64.0	63.5	100.8	103.2
J2	7.1	6.9	102.9	114.5	26.2	26.3	99.6	98.9	9.8	9.8	100.0	101.0	61.2	61.0	100.3	98.7
K2(R)	6.9	7.0	98.6	111.3	26.3	26.4	99.6	99.2	9.8	9.6	102.1	101.0	70.0	70.3	99.6	112.9
L2	6.2	6.2	100.0	100.0	26.1	26.2	99.6	98.5	10.3	10.2	101.0	106.2	60.6	61.4	98.7	97.7
M2		7.2				26.0				9.0				66.5		
N2	7.6			122.6	26.0			98.1	10.0			103.1	65.0			104.8

FKBG DATA	TOTAL	RECYCLED	TOTAL	RECYCLED	TOTAL	RECYCLED	TOTAL	RECYCLED
CUR. AV	6.4	5.7	26.4	26.7	9.7	9.2	61.6	62.8
CUM. AV	6.2	5.7	26.5	26.7	9.7	9.2	62.0	62.4
IND. *D	103.2	100.0	99.6	100.0	100.0	100.0	99.4	100.6

(*)-- NOTES A, B, C, D, AND E, ARE GIVEN IN APPENDIX.

TABLE IV

DATA ON CONDITIONING AND TESTING ENVIRONMENTS

APRIL, MAY, JUNE, 1979

Code	Conditioning Environment: Are Quality Samples Conditioned Before Testing?	Procedure: Time	Procedure: Temp., °F	Procedure: RH, %	Testing Environment: Are Quality Samples Tested Under Controlled Conditions of Temperature and Humidity?
A1	No	--	--	--	No
B1	No	--	--	--	Yes: 72 ± 2°F; 50 ± 2% RH
C1	No	--	--	--	Yes: 72 ± 1°F; 50 ± 2% RH
D1	No	--	--	--	No
E1	No	--	--	--	No
F1	No	--	--	--	No
G1	No	--	--	--	Yes: 70 ± 2°F; 50 ± 2% RH
H1	No	--	--	--	No
I1	No	--	--	--	Yes: 72 ± 2°F; 50 ± 5% RH
J1	No	--	--	--	No
K1	Yes	20 Min	--	--	Yes: 73 ± 2°F; 50 ± 2% RH
L1	No	--	--	--	Yes: 73 ± 2°F; 50 ± 2% RH
M1	Yes	20 Min	--	--	Yes: 72 ± 2°F; 50 ± 2% RH
N1	No	--	--	--	Yes: 73 ± 2°F; 50 ± 5% RH
O1	No	--	--	--	Yes: 73 ± 3.5°F; 50 ± 2% RH
P1	No	--	--	--	No
Q1	No	--	--	--	No
R1	No	--	--	--	No
S1	No	--	--	--	Yes: 72 ± 2°F; 50 ± 2% RH
T1	No	--	--	--	Yes: 73 ± 2°F; 50 ± 5% RH
U1	No	--	--	--	No
V1	Yes	15 Min	72	50	Yes: 72°F; 50% RH
W1	No	--	--	--	Yes: 70 ± 2°F; 50 ± 2% RH
X1	No	--	--	--	Yes: 73 ± 2°F; 50 ± 2% RH
Y1	No	--	--	--	No
Z1	No	--	--	--	No
A2	No	--	--	--	No
B2	No	--	--	--	Yes: 73 ± 2°F; 50 ± 2% RH
C2	Yes	15 Min	72	50	Yes: 72°F; 50% RH
D2	No	--	--	--	No
E2	No	--	--	--	No
F2	No	--	--	--	Yes: 73 ± 2°F; 50 ± 2% RH
G2	No	--	--	--	Yes: 73 ± 2°F; 50 ± 2% RH
H2	No	--	--	--	Yes: 72 ± 2°F; 50 ± 3% RH
I2	No	--	--	--	No
J2	No	--	--	--	No
K2	No	--	--	--	Yes: 72 ± 1°F; 50 ± 1% RH
L2	No	--	--	--	Yes: 72 ± 1°F; 50 ± 2% RH
M2	No	--	--	--	Yes: 73 ± 2°F; 50 ± 2% RH
N2	No	--	--	--	Yes: 70 ± 2°F; 50 ± 2% RH

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APPENDIX

NOTES A, B, C, D, AND E, USED IN TABULATIONS OF MILL DATA

Notes A, B, C, D, and E, used in the tables of mill data are given below; these notes define the procedure used in calculating adjusted basis weight, machine factor, machine index, and F.K.B.G. index. It should be stressed that each formula is applicable only to a specific physical property of corrugating medium.

Note A: Adjusted basis weight (ABW) = reported weight (RBW) adjusted to moisture content of 7.8%:

$$ABW = RBW \left[\frac{(100 - \text{reported moisture content, \%})}{(100 - 7.8)}\right]$$

Note B: Machine factor (%) $= \left[\frac{\text{Current machine average}}{\text{Cumulative machine average}}\right] \cdot 100$ where

$$\text{Cumulative machine average} = \sum \frac{\text{CMA's}^{a} \text{ for previous 12 months excluding CMA for current month}}{12}$$

Note C: Machine index (%) $= \left[\frac{\text{Current machine average}}{\text{Cumulative F.K.B.G. total average}}\right] \cdot 100$ where

$$\text{Cumulative F.K.B.G. average} = \sum \frac{\text{CFKBGA's}^{b} \text{ for previous 12 months excluding CFKBGA for current month}}{12}$$

Note D: F.K.B.G. index (%) $= \left[\frac{\text{Current F.K.B.G. average}}{\text{Cumulative F.K.B.G. average}}\right] \cdot 100$ where

$$\text{Current F.K.B.G. average} = \sum \frac{\text{CMA's}^{a} \text{ for current month for all machines}}{\text{Number of machines}}$$

Note E: (R) — Indicates a medium manufactured from recycled fibers.

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[a] CMA = current machine average for a specific physical property of 26-lb corrugating medium obtained during a given month on a specific machine.

[b] CFKBGA = current F.K.B.G. average for a specific physical property of 26-lb corrugating medium obtained during a given month.